TRANSACTIONS

OF THE

American Society of Civil Engineers.

INDEX.

VOLUME XLIV.

DECEMBER, 1900.

NOTE.—In this Index, Subjects and Writers are given Alphabetically. Titles of Papers are enclosed by quotation marks when indexed alone or under the Author's name. When indexed under the name of a person discussing a paper, the titles are not so enclosed. Titles are entered with reference to the subject and also under the first significant word.

INDEX.

VOLUME XLIV.

DECEMBER, 1900.

ALGÆ.
——in Pipes, 55, 59, 68.

ALLEN, KENNETH. Topographic Surveys, 113.

AVERILL, F. L. Coal Pockets, 143.

BELL, SIR LOWTHIAN. Recent Practice in Rails, 499.

BOECKLIN, WERNER, JR. Coal Conveyor, 146.

BOGGS, J. I. Preservation of Timber, 203.

BOGUE, V. G. Preservation of Timber, 198.

BOLTON, REGINALD PELHAM. High Buildings, 454.

BUCK, R. S. Topographic Surveys, 105.

BUILDINGS.
Height of— An Informal Discussion, 449.

CARR, ALBERT. Power Station of the Metropolitan Street Railway Company, 144.

CARTWRIGHT, ROBERT. Preservation of Timber, 198.

CHIMNEYS.
Power Station of the Metropolitan Street Railway Company. L. G. Montony, 124; W. A. Low, 145.

CHRISTIAN, G. L. Topographic Surveys, 115.

COAL CONVEYORS.
L. G. Montony, 137; W. A. Low, 146; Werner Boecklin, Jr., 146; J. D. Kent, 147.

COAL POCKETS.
L. G. Montony, 128, 147; F. L. Averill, 143; W. A. Low, 146.

COLBY, ALBERT LADD. Recent Practice in Rails, 491.

CURTIS, WALTER W. Preservation of Timber, 204.

DAMS.
"On the Flow of Water Over—" George W. Rafter. (With Discussion.) 220.

DAVEY, HENRY. Filtration of Water, 419.

DEACON, GEORGE F. Filtration of Water, 405.

DEGHUEE, J. H. Preservation of Timber, 195.

DUTY OF WATER.
"Irrigation Studies." Elwood Mead. (With Discussion.) 149.

ELECTRIC RAILROADS.
"The Ninety-Sixth Street Power Station of the Metropolitan Street Railway Company, of New York City." L. G. Montony. (With Discussion.) 119.

"EXPERIMENTS ON THE FLOW OF WATER IN THE SIX-FOOT Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." Charles D. Marx, Charles B. Wing and Leander M. Hoskins, 34.
Discussion: E. Kuichling, 55; G. C. Whipple, 59; J. C. Meem, 60; G. S. Williams, 61; George W. Rafter, 67; George H. Fenkell, 73; D. C. Henny, 80; Charles W. Sherman, 84; Desmond FitzGerald, 86; Charles D. Marx, Charles B. Wing and Leander M. Hoskins, 88.

FELT, C. F. W. Preservation of Timber, 210.

FENKELL, GEORGE H. Flow of Water in Pipes, 73.

"FILTRATION OF WATER FOR PUBLIC USE." An Informal Discussion. Rudolph Hering, 399; George F. Deacon, 405; George W. Fuller, 408; Samuel Rideal, 417; Henry Davey, 419; J. N. Greene, 420; Ad. Kemna, 420; K. E. Hilgard, 425; Walter Hunter, 430; Philip H. Palmer, 431; E. Perrett, 433; Andrew Johnston, 433; H. Alfred Roechling, 436; Nicholas Simin, 438; Rudolph Hering, 443.

FISHER, WAGER. Topographic Surveys, 114.

FITZGERALD, DESMOND.
Flow of Water in Pipes, 86.
Algæ and Spongilla in Pipes, 86.

FLOW OF WATER. See "*Water, Flow of.*"

FOOTE, A. D. Weir Registers, 177.

FUERTES, E. A. Flow of Water over Dams, 339.

FULLER, GEORGE W. Filtration of Water, 408.

FURBER, WILLIAM COPELAND. High Buildings, 472.

GOLDMARK, HENRY.
Topographic Surveys, 105.
Preservation of Timber, 197.

GREENE, J. N. Filtration of Water, 420.

"HEIGHT OF BUILDINGS." An Informal Discussion. Corydon T. Purdy, 449; Reginald Pelham Bolton, 454; Robert W. Hunt, 457; W. E. Riley, 458; H. de B. Parsons, 462; R. J. Gifford Read, 468; Oscar J. Kirby, 468; John F. Wallace, 468; Maurice M. Sloan, 470; William Copeland Furber, 472.

HENNY, D. C. Flow of Water in Pipes, 80.

HERING, RUDOLPH.
Irrigation and Drainage, 176.
Filtration of Water, 399, 443.

HILGARD, K. E. Filtration of Water, 425.

HIMES, A. J. Topographic Surveys, 105.

"HISTORY OF THE PENNSYLVANIA AVENUE SUBWAY, Philadelphia, and Sewer Construction Connected Therewith." George S. Webster and Samuel Tobias Wagner, 1.
Discussion: George S. Webster and Samuel Tobias Wagner, 31.

HORTON, ROBERT E. Flow of Water over Dams, 340.

HOSKINS, LEANDER M. "Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series," 34, 88.

HOWE, HORACE J. Preservation of Timber, 201.

HUNT, ROBERT W.
High Buildings, 457.
Recent Practice in Rails, 475.

HUNTER, WALTER. Filtration of Water, 430.

HYDRAULICS.
"Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.
"Irrigation Studies." Elwood Mead. (With Discussion.) 149.
"On the Flow of Water over Dams." George W. Rafter. (With Discussion.) 220.

"IRRIGATION STUDIES." Elwood Mead, 149.
Discussion: Mansfield Merriman, 176; Rudolph Hering, 176; A. D. Foote, 177; Elwood Mead, 179.

JOHNSTON, ANDREW. Filtration of Water, 433.

KEMNA, AD. Filtration of Water, 420.

KENT, J. D. Coal Conveyor, 147.

KIRBY, OSCAR J. High Buildings, 468.

KUICHLING, EMIL.
Flow of Water in Pipes, 55.
Tuberculation in Pipes, 55.
Algæ and Spongilla in Pipes, 55.
Loss of Head in Venturi Meters, 59.
Flow of Water over Dams, 335.

KUMMER, F. A. "A Proposed Method for the Preservation of Timber." 181, 211.

LANDRETH, WILLIAM B. "Recent Stadia Topographic Surveys: Notes Relating to Methods and Cost." 92, 117.

LOW, EMILE. Topographic Surveys, 100.

LOW, W. A. Power Station of the Metropolitan Street Railway Company, of New York City, 145.

MACGREGOR, R. A. Topographic Surveys, 112.

MAGOR, HENRY B. Topographic Surveys, 103.

MANOMETERS.
"Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.

MARX, CHARLES D. "Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." 34, 88.

MEAD, ELWOOD. "Irrigation Studies," 149, 179.

MEEM, J. C. Flow of Water in Pipes, 60.

MERRIMAN, MANSFIELD. Irrigation Studies, 176.

METERS.
Venturi— "Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.
Loss of head in Venturi—59, 90.
(*See Weir Registers.*)

MONCURE, WILLIAM. Preservation of Timber, 202.

MONTFORT, R. Preservation of Timber, 208.

MONTONY, L. G. "The Ninety-sixth Street Power Station of the Metropolitan Street Railway Company, of New York City." 119, 147.

NELLES, GEORGE T. Flow of Water over Dams, 359.

"NINETY-SIXTH STREET POWER STATION OF THE METROPOLITAN Street Railway Company, of New York City." L. G. Montony, 119.

Discussion: F. L. Averill, 143; Albert Carr, 144; W. A. Low, 145; Werner Boecklin, Jr., 146; J. D. Kent, 147; L. G. Montony, 147.

"ON THE FLOW OF WATER OVER DAMS." George W. Rafter, 220.

Discussion: George Y. Wisner, 315; Gardner S. Williams, 316; E. Kuichling, 335; E. A. Fuertes, 339; Robert E. Horton, 340; Walter C. Parmley, 346; George T. Nelles, 359; George W. Rafter, 383.

OSGOOD, JOSEPH O. Preservation of Timber, 198.

PALMER, PHILIP H. Filtration of Water, 431.

PARMLEY, WALTER C. Flow of Water over Dams, 346.

PARSONS, H. DE B. High Buildings, 462.

PERCOLATION.

"Irrigation Studies." Elwood Mead. (With Discussion.) 149.

PERRETT, E. Filtration of Water, 433.

PIEZOMETERS.

"Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.

"On the Flow of Water over Dams." George W. Rafter. (With Discussion.) 220.

PIPE.

"Experiments on the Flow of Water in the Six-Foot Steel and Wood—Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.

POWER PLANT.

"The Ninety-sixth Street Power Station of the Metropolitan Street Railway Company, of New York City." L. G. Montony. (With Discussion.) 119.

"PROPOSED METHOD FOR THE PRESERVATION OF TIMber." F. A. Kummer. 181,

Discussion: Henry G. Prout, 194; J. H. Deghuée, 195; F. W. Skinner, 195; Henry Goldmark, 197; Robert Cartwright, 198; V. G. Bogue, 198; Joseph O. Osgood, 198; Samuel Whinery, 200; Horace J. Howe, 201; William Moncure, 202; J. I. Boggs, 203; Walter W. Curtis, 204; R. Montfort, 208; C. F. W. Felt, 210; George S. Valentine, 210; F. A. Kummer, 211.

PROUT, HENRY G. Preservation of Timber, 194.

PURDY, CORYDON T. High Buildings, 449.

RAFTER, GEORGE W.
Flow of Water in Pipes, 67.
Algæ and Spongilla, 68.
Topographic Surveys, 116.
"On the Flow of Water over Dams." 220, 383.

RAILROADS.
Pennsylvania Avenue Subway, Philadelphia. George S. Webster and Samuel Tobias Wagner, 1.

RAILROADS, TRACK.
"A Proposed Method for the Preservation of Timber." F. A. Kummer. (With Discussion.) 181.

RAILS.
"Recent Practice in—" An Informal Discussion, 475.

RAILWAYS, STREET.
"The Ninety-sixth Street Power Station of the Metropolitan Street Railway Company, of New York City." L. G. Montony. (With Discussion.) 119.

READ, R. J. GIFFORD. High Buildings, 468.

"RECENT PRACTICE IN RAILS." An Informal Discussion. Robert W. Hunt, 475; Albert Ladd Colby, 491; William R. Webster, 496; Sir Lowthian Bell, 499; J. D. Smelt, 502.

"RECENT STADIA TOPOGRAPHIC SURVEYS: NOTES RELATing to Methods and Cost." William B. Landreth, 92.
Discussion: Emile Low, 100; John F. Wallace, 103; Henry B. Magor, 103; R. S. Buck, 105; Henry Goldmark, 105; A. J. Himes, 105; R. A. MacGregor, 112; Kenneth Allen, 113; Wager Fisher, 114; G. L. Christian, 115; George W. Rafter, 116; William B. Landreth, 117.

RIDEAL, SAMUEL. Filtration of Water, 417.

RILEY, W. E. High Buildings, 458.

ROECHLING, H. ALFRED. Filtration of Water, 436.

SEWERAGE.
"Pennsylvania Avenue Subway, Philadelphia, and Sewer Construction Connected Therewith." George S. Webster and Samuel Tobias Wagner. (With Discussion.) 1.

SHERMAN, CHARLES W.
Flow of Water in Pipes, 84.
Algæ and Spongilla in Pipes, 84.

SIMIN, NICHOLAS. Filtration of Water, 438.

SKINNER, F. W. Preservation of Timber, 195.

SLOAN, MAURICE M. High Buildings, 470.

SMELT, J. D. Recent Practice in Rails, 502.

SPONGILLA.
—In Water Pipes, 55, 59, 68.
STREAMS, FLOW OF.
"Irrigation Studies." Elwood Mead. (With Discussion.) 149.
SUBWAYS.
Pennsylvania Avenue— Philadelphia. George S. Webster and Samuel Tobias Wagner, 1.
SURVEYING INSTRUMENTS.
"Recent Stadia Topographic Surveys: Notes Relating to Methods and Cost." W. B. Landreth. (With Discussion.) 92.
SURVEYS.
"Recent Stadia Topographic— Notes Relating to Methods and Cost." W. B. Landreth. (With Discussion.) 92.
TIES.
"A Proposed Method for the Preservation of Timber." F. A. Kummer. (With Discussion.) 181.
TIMBER, PRESERVATION OF.
"A Proposed Method for the Preservation of— " F. A. Kummer. (With Discussion.) 181.
TOPOGRAPHY.
"Recent Stadia Topographic Surveys: Notes Relating to Methods and Cost." W. B. Landreth. (With Discussion.) 92.
TUBERCULATION IN PIPES.
—of the Rochester Water-Works, 55.
TUNNELS.
"Pennsylvania Avenue Subway, Philadelphia, and Sewer Construction Connected Therewith." George S. Webster and Samuel Tobias Wagner. (With Discussion.) 1.
VALENTINE, GEORGE S. Preservation of Timber, 210.
WAGNER, SAMUEL TOBIAS. "History of the Pennsylvania Avenue Subway, Philadelphia, and Sewer Construction Connected Therewith." 1, 31.
WALLACE, JOHN F.
Topographic Surveys, 103.
High Buildings, 468.
WATER, FLOW OF.
"Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." C. D. Marx, C. B. Wing and L. M. Hoskins. (With Discussion.) 34.
"Irrigation Studies." Elwood Mead. (With Discussion.) 149.
"On the Flow of Water over Dams." George W. Rafter. (With Discussion.) 220.

WATER SUPPLY.
"Filtration of Water for Public Use." An Informal Discussion, 399.
WEBSTER, GEORGE S. "History of the Pennsylvania Avenue Subway, Philadelphia, and Sewer Construction Connected Therewith." 1, 31.
WEBSTER, WILLIAM R. Recent Practice in Rails, 496.
WEIR REGISTERS.
"Irrigation Studies." Elwood Mead. (With Discussion.) 149.
WEIRS.
"On the Flow of Water over Dams." George W. Rafter. (With Discussion.) 220.
WHINERY, SAMUEL. Preservation of Timber, 200.
WHIPPLE, G. C. Algæ, Spongilla, etc., in Pipes, 59.
WILLIAMS, GARDNER S.
Flow of Water in Pipes, 61.
Flow of Water over Dams, 316.
WING, CHARLES B. "Experiments on the Flow of Water in the Six-Foot Steel and Wood Pipe Line of the Pioneer Electric Power Company, at Ogden, Utah. Second Series." 34, 88.
WISNER, GEORGE Y. Flow of Water over Dams, 315.